REMARKS

The Amendment:

Claims 2 and 8 have been amended to obviate the objections raised by the examiner under 35 USC § 112.

Claim 1 has been amended to exclude any coatings on the transfer portion which would either be unstable or decompose at the molding temperature or that would not melt and transfer from the mold surface to the molded part during the molding step. Support for the limitations added in this amendment appear in the last paragraph on page 7, particularly at lines 28-31. The significance of these amendments is discussed, below, in the "Applicants' Arguments" section.

Claims 18 and 19 are added to recite the preferred carrier sheet disclosed on page 1, line 31 to page 2, line 1.

The Prior Art:

Markar et al discloses a single stage transfer useful for labeling preformed polyethylene containers which have pretreated, oxidized surfaces to receive the label; column 6, lines 10, 17 & 19. Applicants' invention seeks to avoid such labeling; specification, page 1, lines 12-16.

Markar et al provide a transfer which has three major layers or coats. These are the heat activated adhesive "top" coat 127; an indicia coat 125; and a protective lacquer coat 123. Additionally, a portion of the wax release layer 115 may also transfer to the article (column 8, line 30).

The adhesive coat 127 is a mixture of a polyamide resin and nitrocellulose which are the only non-volatile constituents of the adhesive composition identified in the table at lines 57-64 in column 5.

The indicia coat (ink design layer) 115 is a conventional polyamide ink.

The protective lacquer coat 123 contains two cross-linked polyester resins, and it is this coat that is the subject of the invention by Markar et al, who disclose that the inclusion of a vinyl resin with the cross-linked polyester resins improves the

grease resistance of the label while retaining the scratch resistance imparted by the cross-linked polyester resins; column 7, lines 25-30.

Noguchi contains a disclosure that the prior art of ink jet printing on paper includes solvent inks which contain a dye and a "solid component like a wax and a polymeric component".

The Rejection:

Claims 1 and 8 were rejected over Markar et al, alone, or in combination with Noguchi. The examiner stated that the use of an indicia material in wax was either inherent in Markar et al, or suggested by Noguchi, and that selection of a heat-activatable adhesive layer with a suitable melting temperature is also either inherent in Markar et al or obvious to one skilled in the art.

The examiner rejected claim 16 on the assumption that the polyamide and nitrocellulose of Markar et al was a hydrocarbon resin. Hydrocarbon is defined as a compound of hydrogen and carbon only.

Applicants' Arguments:

Many modifications to the Markar et al label are necessary to adapt the label to use as a two stage transfer suitable for use in rotational molding.

Most significant is that cross-linked polyester resins are thermosetting, and thus will not melt at any temperature. Accordingly, the protective lacquer layer 123 would prevent the Markar et al transfer from becoming incorporated into the surface of the molded part if it were applied to a rotational mold. One skilled in the art would not obviously eliminate the lacquer layer 123 since that is not taught to be an optional element by Markar et al. Actually, the lacquer layer 123 is an essential element in the Markar et al transfer because it is the very substance of the Markar et al invention, which is directed to improvements to obtain grease resistance of the applied transfer. The claims as now amended recite that all coats of the transfer must melt at a temperature below the molding temperature so that they will transfer

to and become permanently incorporated into the surface of the polyolefiin product. That limitation cannot be met without eliminating the lacquer layer 123 of Markar et al and such elimination is not only not suggested by the prior art, but would be a corruption of the teachings of Markar et al.

Further, the claims as now amended recite that all coats of the transfer must be stable and resist decomposition at the rotational molding temperature. Such temperatures typically are from 350°-650°F. (specification, page 7, lines 30-31). The adhesive layer 127 of Markar et al is a mixture of a polyamide and nitrocellulose which can contain 5-15% nitrocellulose in the formulation (column 6, lines 2-4). This equates to up to 30% or more in the dried layer as the formulation contains almost 60% solvent (column 5, lines 62-63). Nitrocellulose is highly flammable (see the enclosed product safety data sheet of Nobel Enterprises). None skilled in the art would obviously expose a transfer having an adhesive layer containing up to 30% nitrocellulose to rotational molding temperatures as that layer would not be stable under such temperatures.

Finally, one skilled in the art would not obviously change the polyamide ink and solvent used by Markar et al to a hydrocarbon wax/indicia material mixture. Although Noguchi discloses a solvent ink containing wax and a dye, that particular ink is disclosed as useful for ink jet printing on paper and the wax is only used to prevent the ink from running or striking through paper. Since Markar et al print on a lacquer surface, there would be no purpose to substituting the Noguchi ink for the polyamide ink of Markar et al.

Thus, one skilled in the art must make the following changes to the Markar et al transfer to make it suitable for use in rotational molding:

1. The transfer must be adapted to a two stage transfer, which requires printing the indicia as a direct, rather than mirror, image on the carrier;

2. The heat activated adhesive layer must be substituted with some other adhesive layer which is non-adhesive at ambient temperature, adhesive at the demolding temperature and stable at, and melt below, the molding temperature;

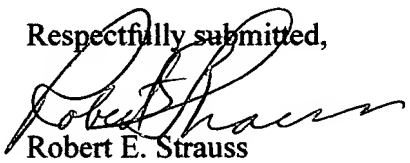
3. The lacquer layer 123 must be eliminated, a step which corrupts the teachings of Markar et al; and

4. The indicia coat must be printed with indicia material in hydrocarbon wax.

Any of these changes considered separately are not obvious. All considered together, are far beyond even the highest probable skill of the art.

The claims are of proper form and scope and, for the reasons set forth herein, define invention over the prior art. Examination and allowance are solicited.

Respectfully submitted,



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Product Safety Data Sheet

Revision July 2002

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY

PRODUCT:	**Industrial Nitrocellulose wetted with alcohol (UN2556) or water (UN2555)**
USE	Industrial Nitrocellulose is used as a binder and or film former in the manufacture of coatings, inks and ancillary printing materials and paints.
MANUFACTURER:	Nobel Enterprises
ADDRESS:	Ardeer Site Stevenston Ayrshire Scotland KA20 3LN
Telephone:	+44 (0)1294 487000
Facsimile:	+44 (0)1294 487111

Emergency Telephone Number (24Hour):+44 (0)1294 461000

2. COMPOSITION/INFORMATION ON INGREDIENTS

	%	CAS No	EC Number	Index No
Nitrocellulose (cellulose nitrate) (<12.3 % N)	65-75	9004-70-0	Not applicable	603-037-01-3
With **Ethyl alcohol**	25-35	64-17- 5	200-578-6	603-002-00-5
or **Isopropyl alcohol**	25-35	67-63-0	200-661-7	603-117-00-0
or **Water**	25-35	7732 -18 - 5	Not applicable	-

	Hazard Symbol	R Phases
Nitrocellulose (cellulose nitrate) (<12.3 % N)	F	R11 Highly flammable
Ethyl alcohol	F	R11 Highly flammable
Isopropyl alcohol	F, Xi	R11 Highly flammable R36 Irritating to eyes R67 Vapours may cause drowsiness and dizziness